IN THE CLAIMS:

1.(Currently Amended): A loudspeaker comprising:

an enclosure including a folded horn having a base end and a mouth;

a summing throat forming a portion of the folded horn;

a plurality of identical acoustic transducers housed in the enclosure; and

a plurality of throats, with at least one throat associated with each acoustic transducer for coupling the output of the acoustic transducer into the folded horn, the throats being disposed at acoustically spaced locations along the summing throat from the base end forward toward the mouth.; ~~and~~

~~throat outlets being differentially spaced from the mouth.~~

2.(currently amended): A loudspeaker as set forth in claim 1, further comprising:

a source of an acoustic range signal; and

transducer drive signal processing circuitry having an individual channel for each of the audio transducers, the individual channels each being coupled to receive the acoustic range signal and each channel including a time delay element for delaying a signal in a channel as a function of the ~~distance of the throat~~ acoustic spacing of the throat for the audio transducer associated with the channel from the mouth of the folded horn to build an acoustic pressure front which builds in a cascade toward the mouth.

3.(original): A loudspeaker as set forth in claim 2, further comprising:

a plurality of high pressure chambers, at least one acoustic transducer being positioned to direct sound energy into each high pressure chamber, each high pressure chamber further having an elongated port to the folded horn providing a throat for the high pressure chamber.

4.(original): A loudspeaker as set forth in claim 3, each channel of the transducer drive signal processing circuitry further comprising:

a band pass filter receiving the acoustic range signal and producing a filtered signal therefrom;

the time delay element receiving filtered signal and producing a delayed, filtered signal; and

a dynamic phase adjustment element receiving the delayed, filtered signal and adjusting the phase of the signal as a function of frequency to produce a drive signal for an acoustic transducer.

5.(original): A loudspeaker as set forth in claim 4, further comprising:

a summing section of the folded horn into which each throat is coupled.

6.(original): A loudspeaker as set forth in claim 5, further comprising:

the acoustic transducers having a small vibrational surface area relative to the predominant range of frequencies to be reproduced; and

a plurality of sealed back chambers, one sealed back chamber housing each acoustic transducer.

7.(original): A loudspeaker as set forth in claim 6, further comprising:

the audio transducers being positioned with respect to one another in a linear array, one to each high pressure chamber.

8.(original): A loudspeaker as set forth in claim 6, further comprising:

a plurality of acoustic transducers coupled to each high pressure chamber.

9.(original): A loudspeaker as set forth in claim 4, wherein the band pass filters, delay elements and dynamic phase adjustment elements are realized in a digital signal processor.

10.(currently amended): Apparatus comprising:

~~a plurality of acoustic transducers including at least two substantially identical acoustic transducers;~~

a plurality of high pressure chambers ~~with an acoustic transducer associated with each high pressure chamber, including two high pressure chambers~~ of substantially the same volume ~~into which the output of one each of the two substantially identical acoustic transducers is directed~~;

an extended acoustic port having a constant cross-sectional area from each high pressure chamber; ~~and~~

a horn having a summing section and a mouth, the summing section comprising a base end of the horn furthest removed from the mouth and an elongated waveguide ; ~~connected to a radiating end of each extended acoustic port and a mouth, the radiating ends of the extended acoustic ports associated with the two high pressure chambers of substantially the same volume being differentially spaced in terms of acoustic propagation time from the mouth.~~

the extended acoustic ports being connected into the summing section at acoustically spaced locations beginning at the base end of the horn and at serially closer locations to the mouth; and

a plurality of identical acoustic pressure wave generators, one of each being coupled to radiate into each high pressure chamber.

11.(currently amended): Apparatus as claimed in claim 10, further comprising:

means for coordinating operation of the acoustic pressure wave generators ~~two substantially identical acoustic transducers~~ so that the pressure waves from the radiating ends of the acoustic ports reinforce one another.

12.(currently amended): Apparatus as claimed in claim 11, wherein the acoustic pressure wave generators are substantially identical transducers and are aligned side by side.

13.(original): Apparatus as claimed in claim 11, wherein the acoustic transducers are housed in sealed back chambers.

14.(currently amended): Apparatus as claimed in claim 11, the means for coordinating further comprising

drive circuitry for the ~~substantially identical~~ acoustic pressure wave generators ~~transducers~~ including delay means for synchronizing merger of the pressure waves upon their meeting in the summing section.

15.(currently amended): Apparatus as claimed in claim 14, the drive circuitry including a pass band filter associated with each of the acoustic pressure wave generators ~~substantially identical transducers~~ and a dynamic phase adjustment element for each of the ~~substantially identical~~ acoustic pressure wave generators ~~transducers~~.